Operator's Manual

SETTING UP INSTRUCTIONS

McCORMICK®
Cub-F144
Cultivator

® Registered Trade-Mark

INTERNATIONAL HARVESTER COMPANY

180 North Michigan Ave. Chicago 1, Illinois, U.S.A.

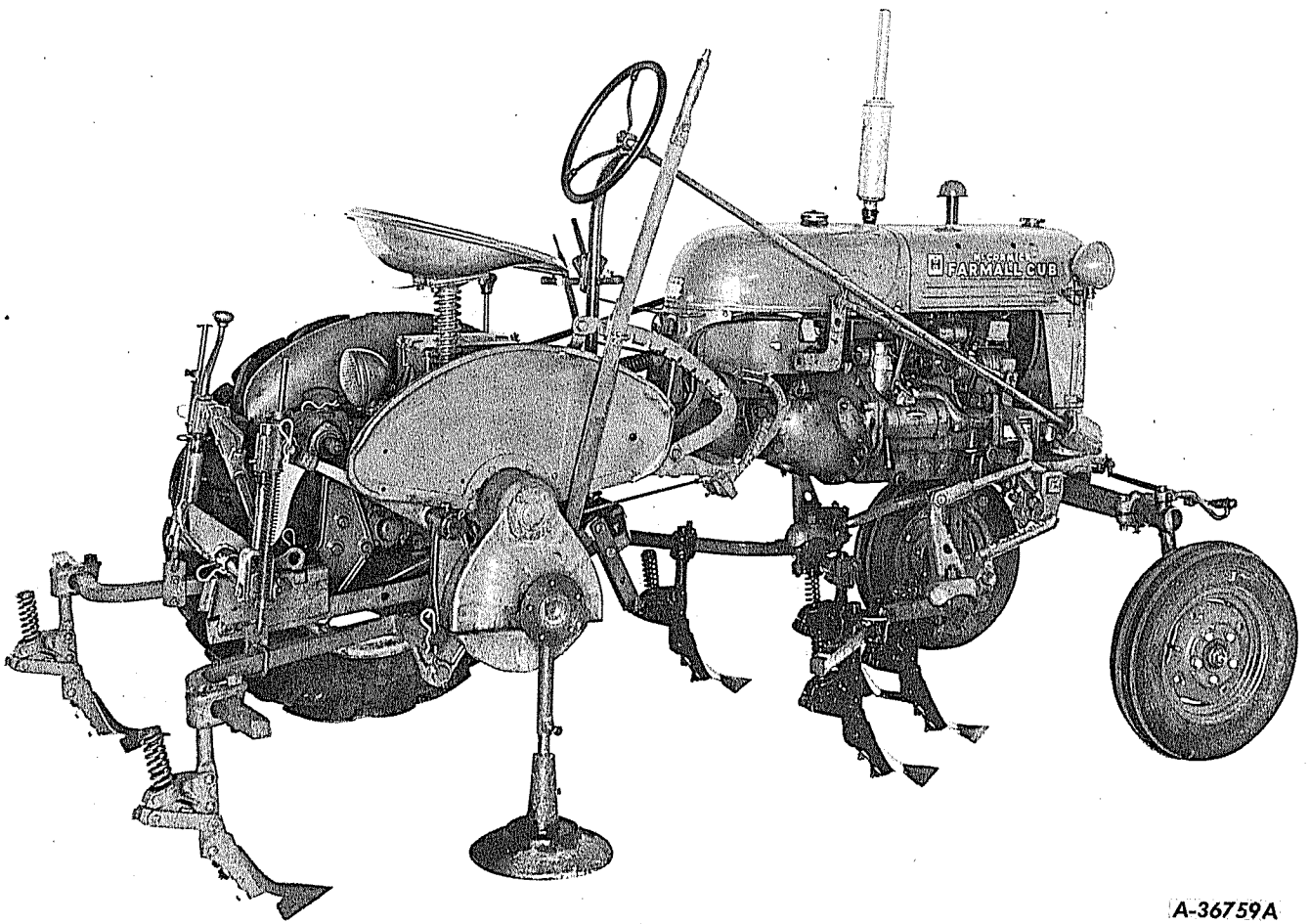
TO THE OWNER

The purpose of this manual is to assist you in realizing the benefits you anticipated when you purchased this International Harvester product. Literally thousands of people have contributed to the design and production of this product and its delivery to you. They have an interest in its successful performance and have provided this manual to give you the benefit of the experience they have gained through years of field testing and normal usage of this and similar products.

The way you operate and the care you give this product will have much to do with its successful performance. This manual has been carefully prepared and the information arranged and illustrated to make it as easy as possible for you to find the information you wish. It will pay you to read the entire manual carefully before operating and keep it handy for future reference. Your International Harvester Dealer will be glad to answer any further questions you may have on the operation or care of this product.

It is the policy of International Harvester Company to improve its products whenever it is possible and practical to do so. We reserve the right to make changes or add improvements at any time without incurring any obligation to make such changes on products sold previously.

All illustrations and descriptive matter in this publication apply to International Harvester products sold under the McCormick, McCormick-International, McCormick-Deering, or McCormick-Deering International trade name.



A-36759A

Cub-F144 Farmall Cultivator with No. 1 Tool Equipment.

INTRODUCTION

The Cub-F144 Cultivator is a simple, practical one-row cultivator for small acreage for use with the Farmall Cub® Tractor equipped with Fast-Hitch. This machine will cultivate one acre of corn or similar row crops per hour under average field conditions. The operator has a clear unobstructed view of the row being cultivated, which permits close and untiring observation of the work being done.

The universal mounting frame is required for all front-mounted implements such as cultivators and planters. This unit is furnished only when ordered and is not included in the price of the cultivator. As only one unit is required for one tractor, this results in a savings for the owner of more than one implement.

The Fast-Hitch is used with the cultivator rear section. By connecting the pressure rods to the rockshaft arms, raising, lowering, and control of depth is maintained. The hitch pull bar and stabilizing links may either remain in place or be removed, as desired. Remove the pull bar and stabilizing links to give clearance over crops having high foliage.

The front gangs are the parallel acting type on which four spring trip standards carrying two 8" full sweeps, two 10" half sweeps, and parallel acting shields, are mounted regularly.

The rear gangs are regularly equipped with spring trip standards and 10" sweeps which cultivate directly behind the rear wheels.

The cultivator gangs are easily and quickly attached and detached without disturbing any of the set adjustments when the tractor is to be used for some other purpose.

The ground working tools have 1-1/4" round standards. The standard clamps (for 1-1/4" round standards) are the single wedge bolt type which are easily and quickly adjusted. The clamp is designed so that the single wedge bolt secures the vertical adjustment of the standard and at the same time the position of the clamp along the tool bar. Tool bar clamps (for 1-1/4" round standards) are provided with a lateral adjustment and secure the tools running next to the row.

A great variety of tooling equipments and attachments is available to meet the conditions imposed by the various crops and soil conditions. These are available on special order and include the following:

Friction break standards for use where the fields are clear of stumps or stones.
Spring teeth, popular with potato growers.
Tent shields for high speed cultivation of young crops.
No. 83 Jockey Arch for use on rear section. This attachment is especially recommended when large, heavy sweeps are used on the rear gangs.
Cub-101A Fertilizer Unit for placing fertilizer beside the crop row.
Weeder Mulcher Attachment to break up crusts and keep the surface free of weeds and well mulched.
No. 12 Rotary Weeder Attachment for high speed cultivation of small young plants.
Barring Off Disk Attachment which may also be used for hilling up when desired.

The Cub-101A Fertilizer Unit is for use with the Cub-F144 Cultivator for side dressing. It consists mainly of the countershaft assembly and delivery assembly. As regularly equipped, the flow of fertilizer is directed back of the sweep running next to the row. The Deep Applicator Attachment may be obtained on special order. This attachment places the fertilizer accurately and deep enough to prevent blowing.

The countershaft assembly includes the parts necessary to drive the seed hoppers used with the Cub-173A and Cub-174A Planters. A mounting plate on the countershaft frame provides a ready means of attaching the seed delivery parts. This results in a saving to the owner operating both planter and fertilizer attachments.

The delivery assembly includes the hopper and mounting bracket which may be used for fertilizing beside the seed row when using one of the planters mentioned above. A few extra parts are required when this is done.

The hopper is the star feed type with a fingered feed wheel which revolves in the hopper bottom and carries the fertilizer under an adjustable gate to the discharge opening. The capacity of the hopper is approximately 65 pounds of average commercial fertilizer.

The quantity of fertilizer sown is regulated by adjusting the gate opening with the lever outside the hopper, by changing feed wheels inside the hopper, or by changing the sprocket on the feed shaft. An extra feed wheel may be obtained on special order. The range of distribution may be from 25 to 1740 pounds per acre. The gate opening lever will permit a range of 25 to 510 pounds per acre when the regular feed wheel and the slow speed sprocket are used. The range is from 50 to 890 pounds per acre when the fast speed sprocket and the regular feed wheel are used. These figures are approximate and are based on average free-running commercial fertilizer and 40" row spacing.

The Extra Hopper Attachment is designed to approximately double the amount of fertilizer put down by the regular unit. It is mounted on the left side of the tractor and includes a hopper with support and driving mechanism and a delivery tube leading to the sweep running nearest the left side of the row. The hopper is driven by an extension shaft, leading from the left end of the countershaft. This arrangement meets the demands of tobacco growers desiring to place a band of fertilizer on both sides of the row.

NOTE: Unless otherwise mentioned the instructions in this manual apply to all the tool equipment listed below:

The No. 1 Tool Equipment is furnished "Regular" with four spring trip standards, two 8" full sweeps and two 10" half sweeps on the front section, and two spring trip standards with 10" full sweeps on the rear section.

The No. 3 Tool Equipment is furnished "Special" with four spring trip standards, two 8" full sweeps and two 10" half sweeps on the front section, and four spring trip standards with 8" full sweeps on the rear section.

The No. 5 Tool Equipment is furnished "Special" with six spring trip standards with 2-1/2 x 11" double point shovels on the front section, and two spring trip standards with 10" full sweeps on the rear section.

The No. 33 Tool Equipment is furnished "Special" with four friction break standards, two 8" full sweeps and two 10" half sweeps on the front section, and four friction break standards with 8" full sweeps on the rear section.

The No. 34 Tool Equipment is furnished "Special" with four friction break standards, two 8" full sweeps and two 10" half sweeps on the front section, and two friction break standards with 10" full sweeps on the rear section.

The No. 35 Tool Equipment is furnished "Special" with six friction break standards with 2-1/2 x 11" double point shovels on the front section, and two friction break standards with 10" full sweeps on the rear section.

The No. 42 Tool Equipment is furnished "Special" with six spring trip standards, two 8" full sweeps and four 10" full sweeps on the front section, and two spring trip standards with 10" full sweeps on the rear section. This equipment is especially recommended for use with the Barring Off Disk Attachment.

The No. 53 Tool Equipment is furnished "Special" with six spring teeth with 2-1/2 x 11" double point shovels on the front section and two triple-tooth spring tooth gangs with 2-1/2 x 11" double point shovels on the rear section.

FOUR-SWEEP FRONT SECTION: This style is available with the Nos. 1, 3, 33 and 34 Tool Equipments.

SIX-SWEEP FRONT SECTION: This style is available with the No. 42 Tool Equipment.

SIX-SHOVEL FRONT SECTION: This style is available with the Nos. 5 and 35 Tool Equipments.

TWO-SWEEP REAR SECTION: This style is available with the Nos. 1, 5, 34, 35 and 42 Tool Equipments.

FOUR-SWEEP REAR SECTION: This style is available with the Nos. 3 and 33 Tool Equipments.

NOTE: All styles of Tool Equipment mentioned above are available with either friction break standards or spring trip standards.

You are urged to consult your International Harvester dealer concerning unusual field conditions or special crops. International Harvester men have spent years in research and study of these things. Let the experience of these men serve you.

Be sure to read the instructions for Adjusting and Operating in this manual. Check each item referred to and acquaint yourself with the adjustments required to do a good job and to get maximum trouble-free service from your machine.

Remember, a cultivator which is properly lubricated and adjusted saves time, labor and fuel costs.

INSTRUCTIONS FOR ADJUSTING AND OPERATING

(Setting Up Instructions are on page 9)

LUBRICATION

Keep all bearings and moving parts well lubricated.

GENERAL

It is recommended that the tractor be equipped with 7-24" or 8-24" tires on the rear and 4.00 x 12" tires on the front for better traction and steering in loose ground and maximum clearance when the cultivator is raised; however, 6-24" tires on the rear and 3.00 x 12" tires on the front can be used.

Extra weight on the tractor wheels is recommended for cultivating hillside fields and to better stabilize the tractor. For this purpose, liquid in the tires (such as calcium chloride solution) or wheel weights (available on special order) may be used.

IMPORTANT: Before operating the cultivator, be sure all bolts and set screws are perfectly tight and all cotters are spread to keep them from falling out.

WIDTH OF ROWS

This cultivator will cultivate rows spaced from 36" to 56" when the tractor is equipped with the adjustable front axle. For tractors equipped with the fixed front axle, it is possible to cultivate rows spaced from 36" to 44"; however, if conditions require the front tractor wheels to run in the exact center between the rows, as in irrigation furrows, only 40" rows may be cultivated. In view of the limitations of the fixed front axle, it is recommended that the tractor be equipped with the adjustable type axle.

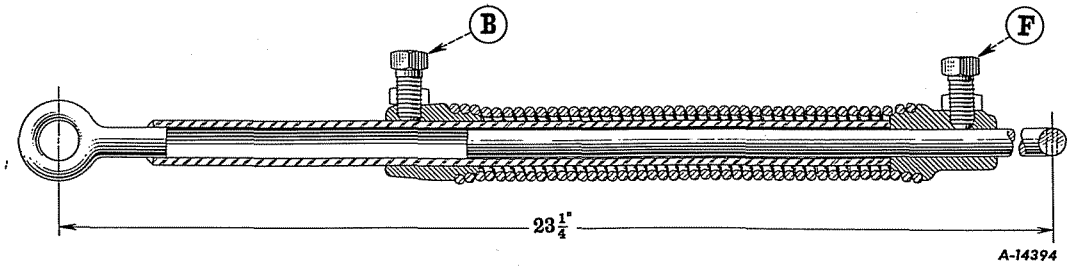
PRESSURE SPRINGS

For ordinary working conditions, the pressure springs "A" *(Illusts. 12 and 13)* should be set so that a slight pressure is exerted on the gangs. In hard ground, it may be necessary to increase the spring pressure.

ON THE FRONT SECTION: To increase the pressure on the gangs, raise the cultivator, loosen the set screw "B" *(Illusts. 1, 12 and 13)*, stretch the spring to give the desired tension, and tighten the set screw securely.

ON THE REAR SECTION: To increase the pressure on the gangs, raise the cultivator, loosen the set screw "C" *(Illust. 19)*, compress the spring to give the desired tension, and tighten the set screw securely.

If the gangs do not penetrate properly after making these adjustments, check the setting of the shovels.



Illust. 1

SHIELDS

The height of the shield above the row is controlled by the adjusting clip "G" *(Illusts. 29, 30, 33, and 34)*. To adjust the shield, loosen the rear bolt in the shield support, set the shield as desired, bring the clip to bear against the pivot link and tighten the bolt securely.

To move the shield toward or away from the row, loosen the U-bolt holding the shield to the tool bar clamp and adjust as desired.

SETTING OF SWEEPS AND SHOVELS

It is important to operate the cultivator with the standards adjusted to a vertical position and the shovels or sweeps pointing directly forward. When this is done, more accurate spacing of the tools is obtained and the standard shanks will function properly when an obstruction is encountered in the field. The shanks are all adjustable to give the proper suck to the sweeps or shovels.

SPRING TRIPS

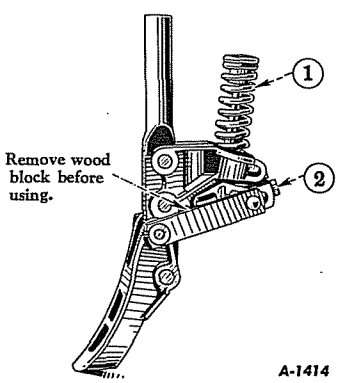
IMPORTANT: Be sure to remove the wood block between the adjusting bar and spring bracket before using the trip.

Spring trips are adjusted at the factory to trip properly and will work under all ordinary conditions without changing the spring tension. Adjustment should not be changed unless absolutely necessary.

To Change Adjustment

The pitch of the shovel shank can be changed by adjusting the machine bolt (2).

The trip can be made to break harder by tightening the spring (1).



Illust. 2

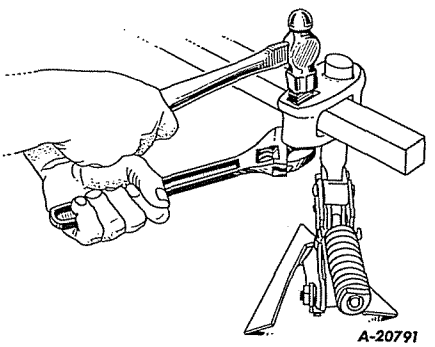
CAUTION: This should rarely be done the first day or two the cultivator is in operation, because the trip will break much harder after it has been in use some time, and, if the spring is tightened down at first, will be too tight to operate after it has been in use awhile.

Lubricate all the pivot points frequently to avoid locking of the trip.

If the trip should become rusty and refuse to break, loosen it by lubricating all the pivot points with kerosene.

WEDGE BOLT CLAMPS

It is important that the wedge bolt clamps be tightened securely to assure that the spring trip or spring teeth shanks do not come loose. This is easily done by using a hammer and wrench as shown *in Illust. 3*.



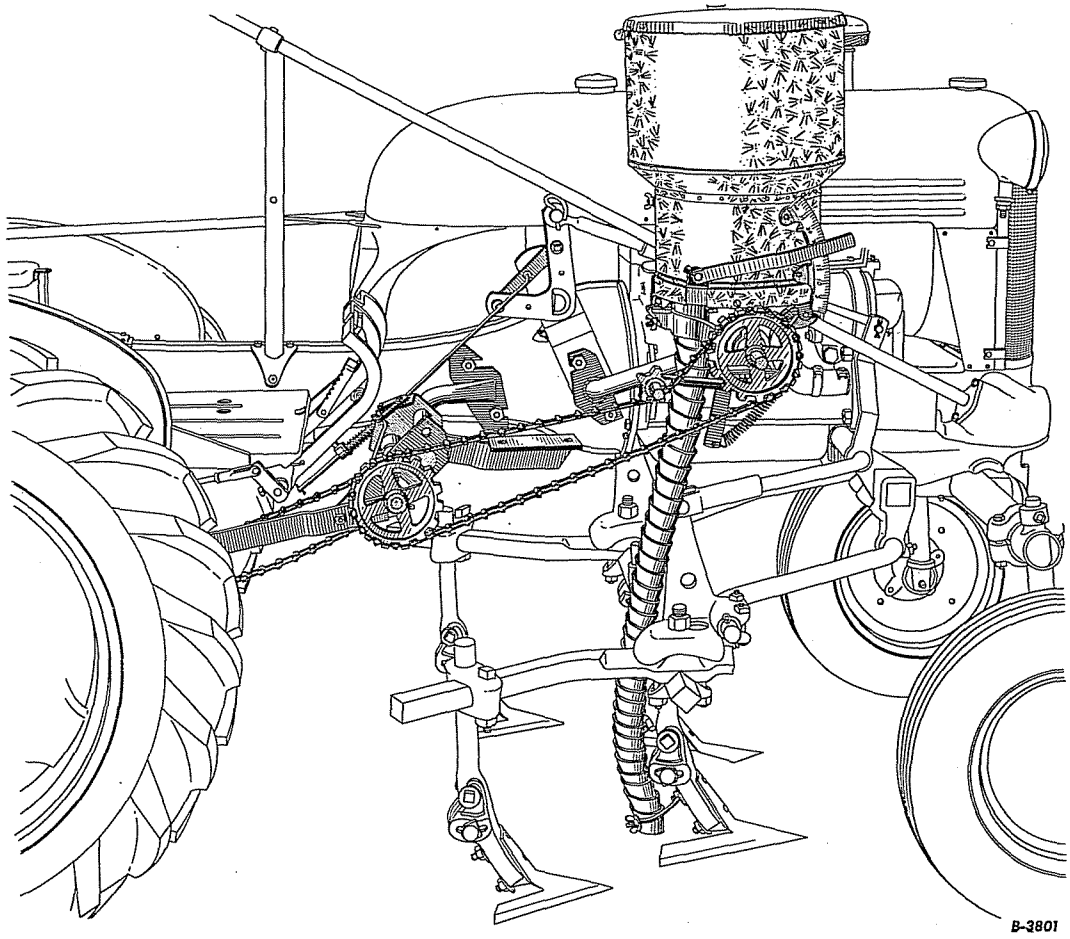
Illust. 3

TO TIGHTEN THE CLAMPS: Drive the wedge bolt in place with a hammer. Tighten the nut with a wrench and at the same time strike the head of the wedge bolt with the hammer. Continue to do this until the wedge bolt is tight.

TO LOOSEN THE CLAMPS: Back off the nut until it is near the end of the wedge bolt and strike the end of the wedge bolt with a hammer. Use care not to strike the corners of the nut or the threads may become damaged.

MASTER CONTROL LEVER

CAUTION: Whenever the implement is removed from the tractor, the master control lever must always be set in the FORWARD notch in the quadrant. If another implement is not to be attached, the tension of the counterbalancing spring should be relieved.



Illust. 4
Cub-101A Fertilizer Unit shown with the Cub-F144 Cultivator.

Lubrication

Use the pressure lubricating gun furnished with the tractor and lubricate the following places twice daily when in use:

Two fittings in hopper shaft bearings.
Two fittings in countershaft bearings.
One fitting in countershaft clutch.
Two fittings in chain tightener sprockets.

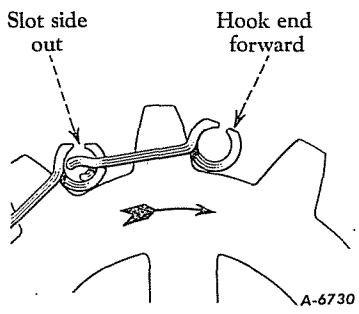
HOPPER MECHANISM: Use kerosene or paraffin oil to cut the paint on the hopper mechanism so the parts will work freely.

Use nothing but kerosene or paraffin oil on the interior mechanism.

Chains

Place the chains on the sprockets as shown in Illusts. 5 and 6 according to the size of the drive sprocket in relation to the size of the sprocket to be driven.

When the drive sprocket is larger than the driven sprocket, the chain should be placed on the sprockets as shown *in Illust. 5.*

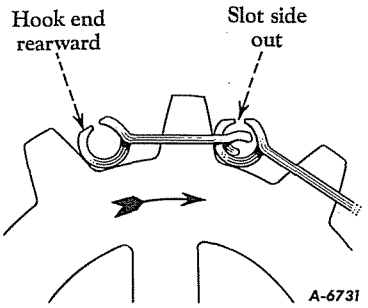


Illust. 5

CUB-101A FERTILIZER UNIT (Special) - Continued

Chains - Continued

When the drive sprocket is smaller than the driven sprocket, the chain should be placed on the sprockets as shown *in Illust. 6.*

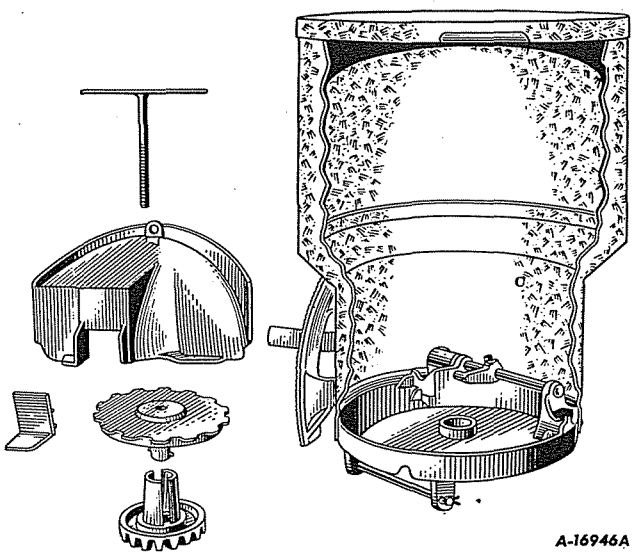


Illust. 6

To detach the chain, bend to the coupling position and strike light blows.

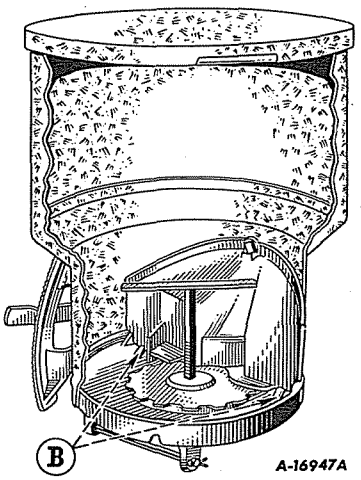
Cleaning the Fertilizer Hoppers

As most fertilizer becomes set and hard when left standing, it is necessary to empty the hoppers and clean the feeding mechanism frequently. All working parts in the hopper are easily removed for cleaning. *See Illust. 7.*

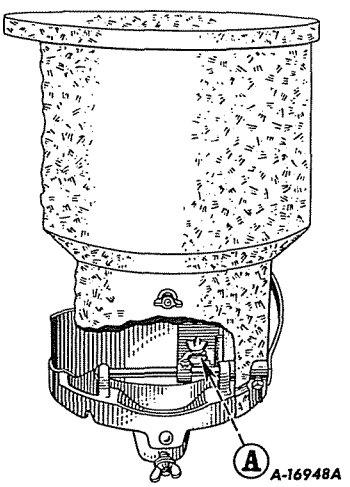


Illust. 7
Fertilizer hopper cut away to show the inside of hopper and the parts removed for cleaning.

CAUTION: When replacing the back plate in the hopper, it is important that the lugs on the fertilizer gate fit over the raising arm on the gate rod, as at "A" *in Illust. 9.* It is also important that the bottom of the back plate rests behind the lugs on the fertilizer hopper bottom as at "B" *in Illust. 8.*



Illust. 8
Fertilizer hopper cut away to show the inside of hopper with the parts in working position.



Illust. 9
Fertilizer hopper cut away showing assembly behind back plate.

IMPORTANT: Never leave fertilizer in the hopper overnight. Many kinds of commercial fertilizer will cement the parts together so tightly in a few hours that it is extremely hard to get the feeds loose again.

CUB-101A FERTILIZER UNIT (Special) - Continued

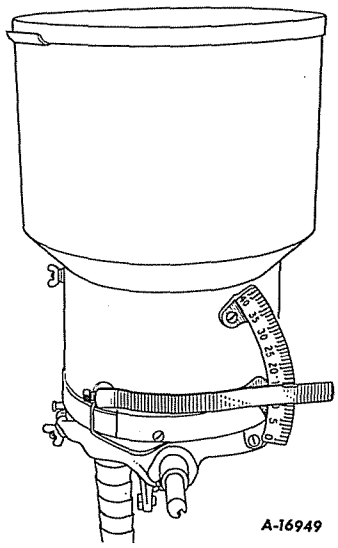
Sowing Fertilizer

Fertilizer must be free from all hard substances such as stones, iron or other foreign matter that is liable to break the feeding device.

The quantity of fertilizer sown is regulated by the lever on the outside of the hopper which engages the notches in the quantity rack. *See Illust. 10.*

CAUTION: Do not attempt to push the quantity lever below Notch No. 5 with fertilizer in the hopper.

Owing to the fact that there is a great variety of commercial fertilizer on the market, it is impossible to make a sowing table that would indicate with any accuracy the actual amount of fertilizer sown per acre. Many factors can affect the accuracy of any table; for example, dry or damp material, fine or coarse, etc. However, a table of approximate quantities sown is given for use as a guide when setting the quantity lever.



Illust. 10
Fertilizer quantity lever.

The following sowing table is based upon the use of dry, free-running commercial fertilizer weighing a little over 3 pounds per quart. **All quantities given are approximate.**

Fertilizer Sowing Table

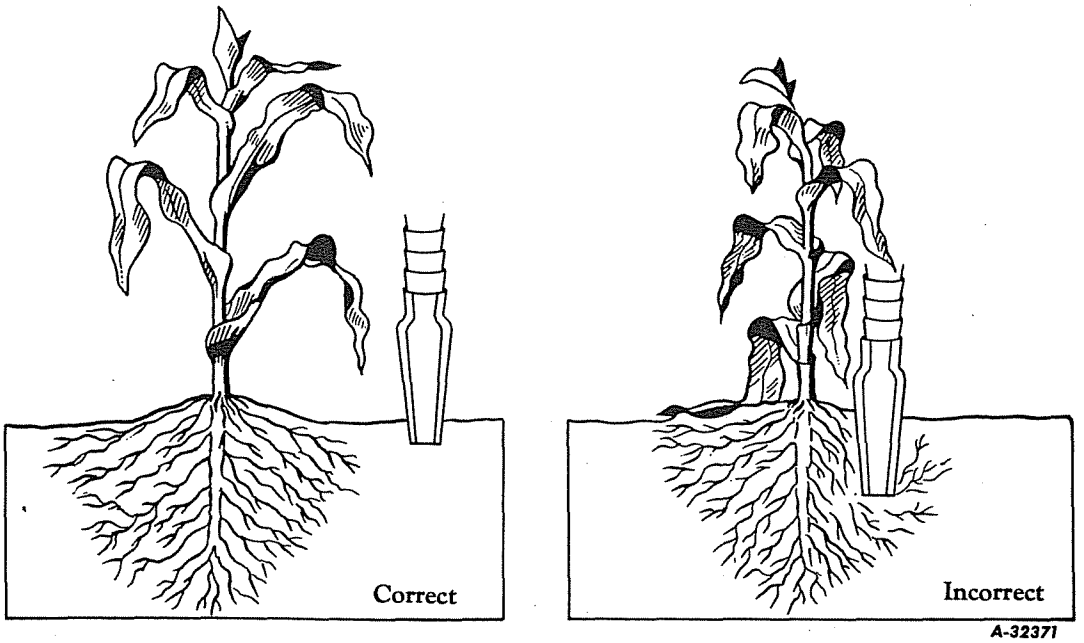
Number of Notch	Pounds per Acre - 40" Rows Using Feed Wheel			
	622 489 R11 (Regular)		NC 115X (Special)	
	Slow Speed 15-Tooth Sprocket	Fast Speed 7-Tooth Sprocket	Slow Speed 15-Tooth Sprocket	Fast Speed 7-Tooth Sprocket
0	25	50	300	560
5	60	110	330	620
10	140	240	400	740
15	230	430	500	920
20	310	580	600	1100
25	380	710	700	1280
30	440	800	800	1460
35	490	850	900	1630
40	510	890	940	1740

The quantity of fertilizer sown at a given setting can be checked by determining the amount of fertilizer used in the forward travel required for one acre. For a one-row machine set for 40" rows (40" strip), the forward travel required for one acre is 792 rods.

For row spacings other than 40", the quantity is proportionately larger for narrower spacing and proportionately smaller for wider spacing.

When through using the fertilizer unit for the season, clean it thoroughly, including the tubes and the fertilizer boots, and oil with kerosene.

FERTILIZER DEEP APPLICATOR ATTACHMENT



Illust. 11

Illust. 11 shows the correct and incorrect placement of fertilizer for side dressing of corn. The correct placement is the recommendation of various agronomists and is approved by the National Joint Committee on Fertilizer Application.

Place the fertilizer 2 to 3" deep about 14 to 16" to one or both sides of the corn row.

The recommended height of corn at the time of side dressing is 18 to 22".

INSTRUCTIONS FOR SETTING UP

(Adjusting and Operating Instructions are on page 4)

Remove all wires and arrange the parts conveniently.

Lubricate all bearings and moving parts as you proceed, and see that they work freely.

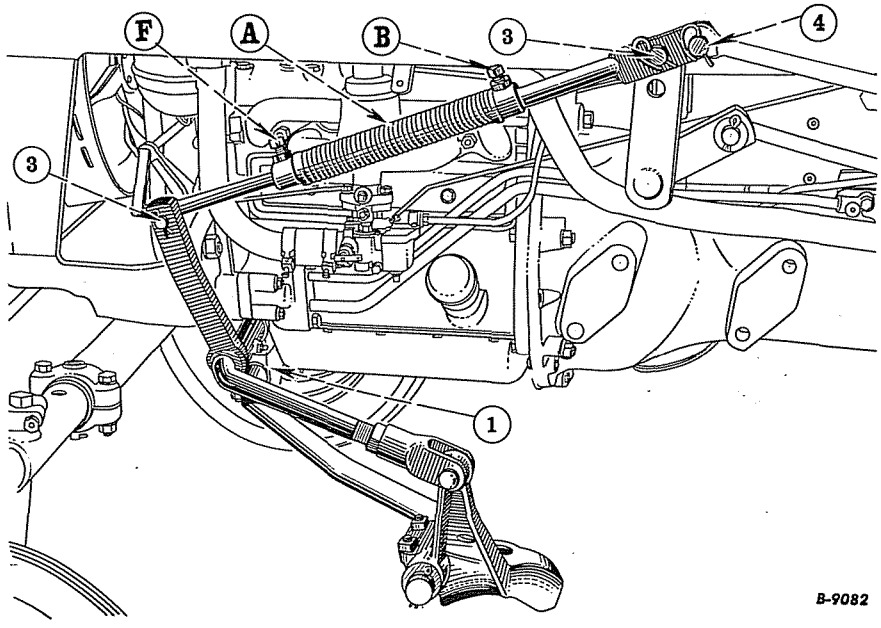
Bolts must be used in the holes in which they are found, or in the parts to which they are attached, unless otherwise shown.

Shaded portions in the illustrations show parts to be assembled; these must be placed on the machine in the order numbered.

Wherever the terms "right" and "left" are used, it should be understood to mean from a position behind and facing the machine.

We reserve the right to make changes or improvements in the design or construction of any part without incurring the obligation to install such changes on any machine previously delivered.

UNIVERSAL MOUNTING FRAME



Illust. 12 - Left side of tractor

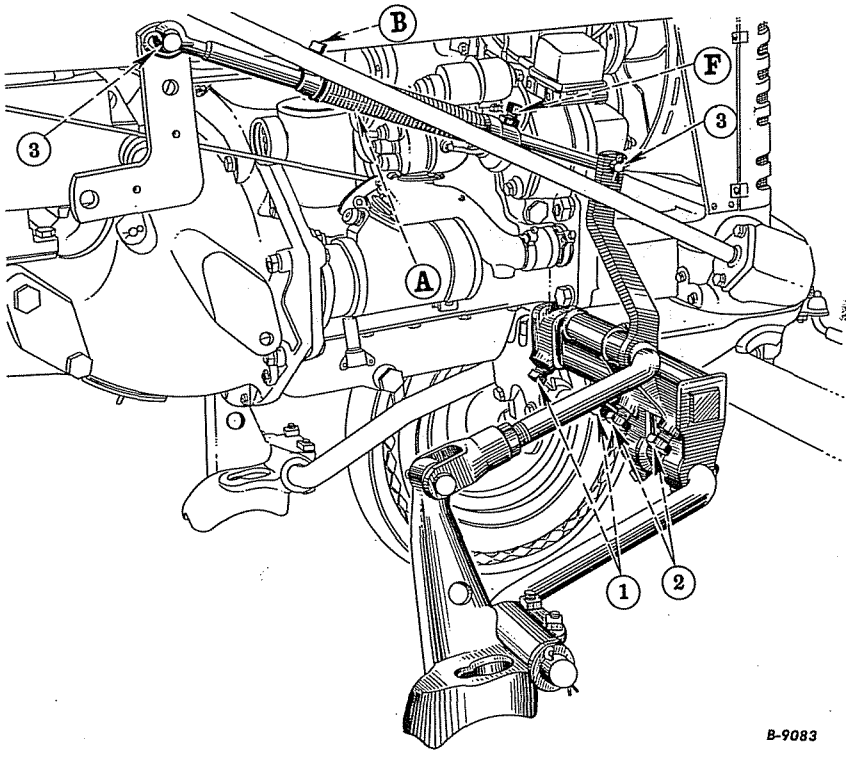
1. Slide the left frame bar through the steering gear housing base and tighten the set screws.

2. Slide the right frame over the end of the left frame bar and tighten the set screws.

3. Attach the push rods to the lift arms and front rockshaft as shown. Use the long push rod on the left side of the tractor.

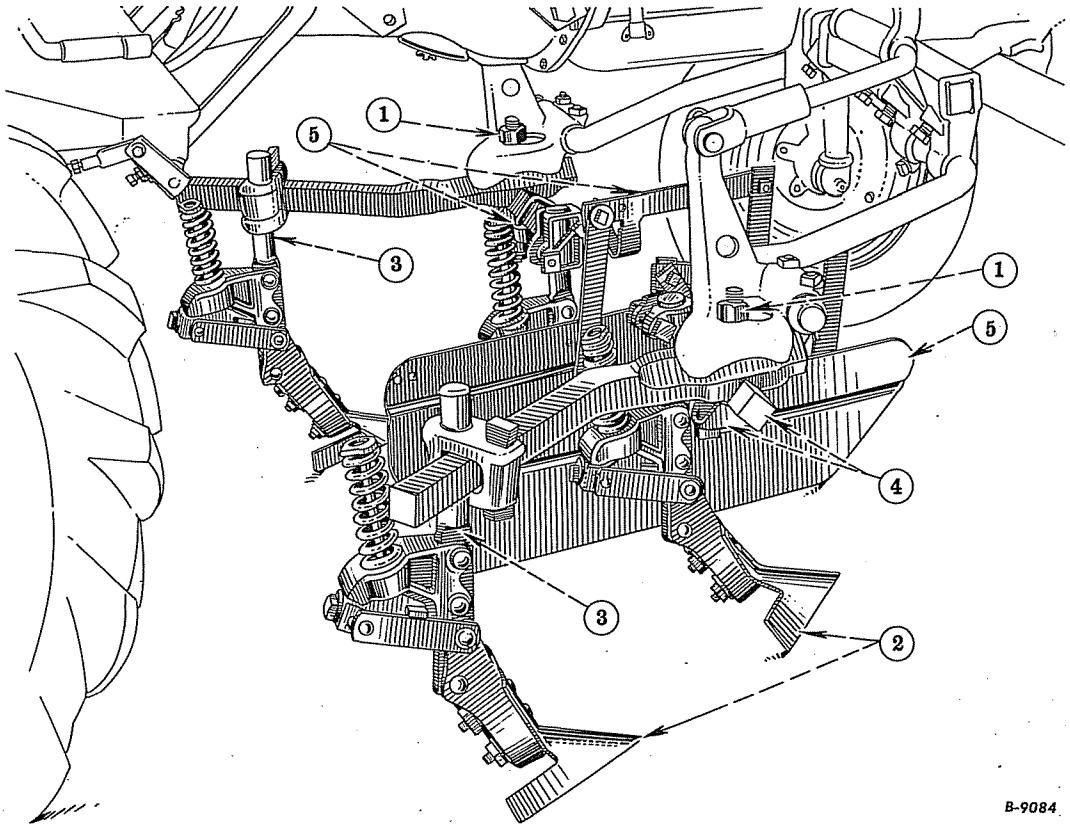
4. Connect the Fast-Hitch lift link to the push rod on the left side of the tractor.

CAUTION: Loosen set screw "F" *(Illusts. 1, 12 and 13)* and extend the push pipe extension to measure 23-1/4" as shown *in Illust. 1.* Tighten the set screw and secure the adjustment with the jam nut.



Illust. 13 - Right side of tractor

FOUR-SWEEP FRONT SECTION
(Nos. 1, 3, 33, and 34 Tool Equipments)



Illust. 14

Illustration shows spring trip standards.

Friction break standards are attached in the same manner.

1. Attach the tool bar assemblies to the cultivator frame.

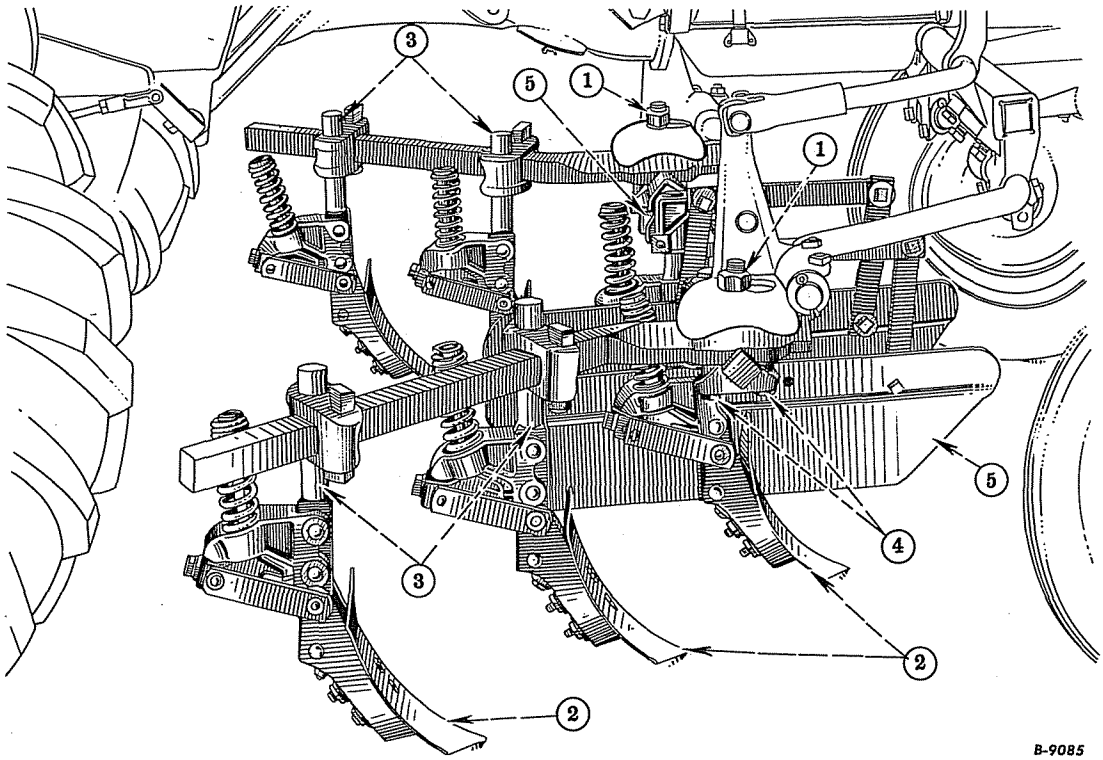
2. Bolt the sweep to the standards with the half-sweeps on the short standards.

3. Attach the standards to the tool bars with the long standards in the rear and the short ones, with the half-sweep, next to the row. See "WEDGE BOLT CLAMPS" in the Adjusting and Operating Instructions.

4. Loosen the tool bar clamps and adjust the standards closer to or farther from the row as desired. Tighten the clamps securely after making an adjustment.

5. Put on the shields.

SIX-SHOVEL FRONT SECTION
(Nos. 5 and 35 Tool Equipments)



Illust. 15

Illustration shows spring trip standards.

Friction break standards are attached in the same manner.

1. Attach the tool bar assemblies to the cultivator frame.

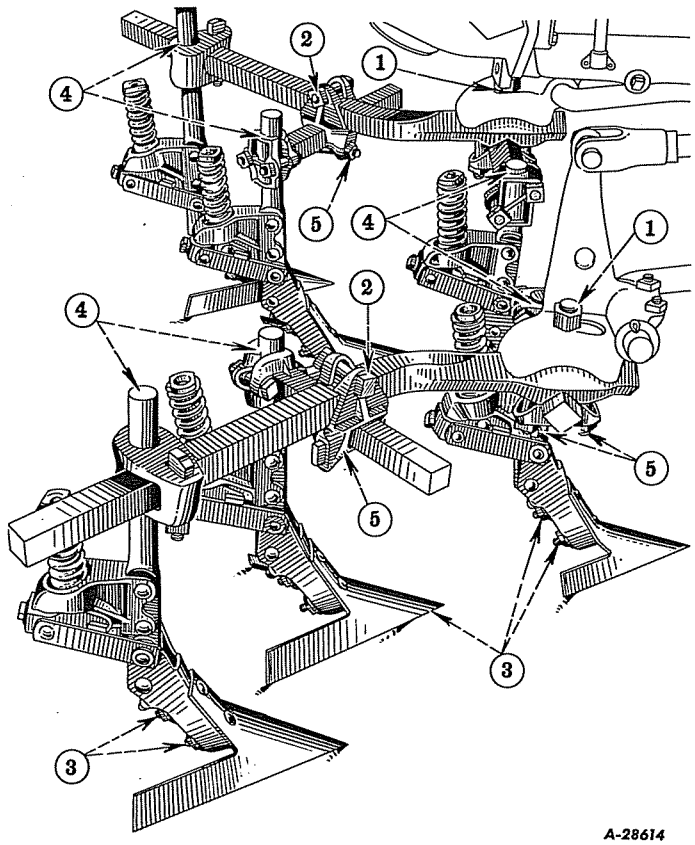
2. Bolt the shovels to the standards.

3. Attach the standards to the tool bars with the short standards next to the row.

4. Loosen the tool bar clamps and adjust the standards closer to or farther from the row as desired. Tighten the clamps securely after making an adjustment.

5. Put on the shields.

SIX-SWEEP FRONT SECTION
(No. 42 Tool Equipment)



Illust. 16

1. Attach the tool bar assemblies to the cultivator frame.

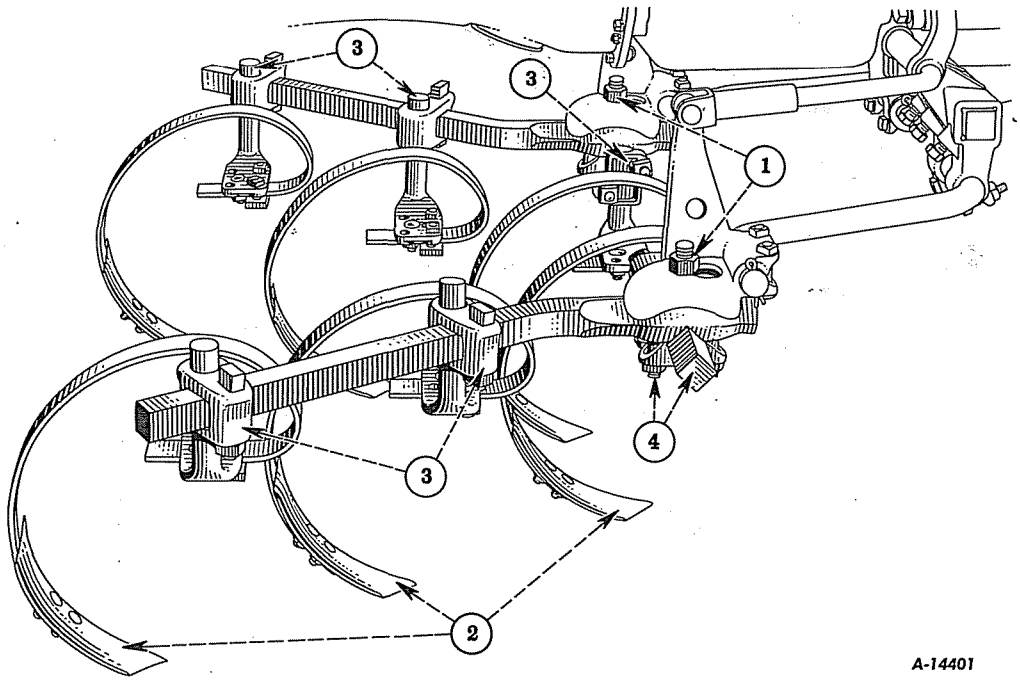
2. Slide the tool bar extension clamps over the ends of the tool bars and clamp them in place as shown.

3. Bolt the sweeps to the standards.

4. Attach the standards to the tool bars. Three lengths of standards are furnished. Use the longest standards near the ends of the tool bars in front of the wheels. Use the shortest standards in front next to the row.

5. Loosen the tool bar clamps and adjust them to locate the sweeps with relation to the row as desired. Tighten the clamps securely after making an adjustment.

SIX-SPRING TOOTH FRONT SECTION
(No. 53 Tool Equipment)



Illust. 17

1. Attach the tool bar assemblies to the cultivator frame.

2. Bolt the shovels to the spring teeth.

3. Attach the spring teeth to the tool bars as shown.

4. Loosen the tool bar clamps and adjust the spring teeth closer to or farther from the row as desired. Tighten the clamps securely after making an adjustment.

TWO-SWEEP REAR SECTION
(Nos. 1, 5, 34 and 42 Tool Equipments)

See Illusts. 18, 19 and 20.

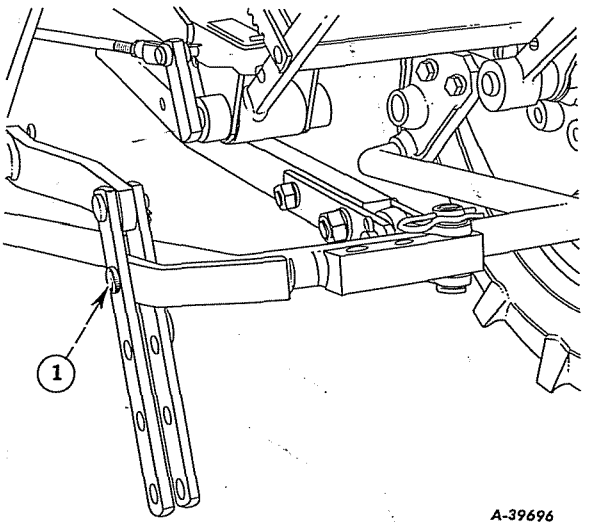
1. Raise the front end of the Fast-Hitch bail and pin it in the top hole in the hitch height adjusting links. Pull the hitch adjusting lever back and set it in the rear notch to raise the bail as high as possible for maximum clearance under the tractor. Refer also to the instructions furnished with the Fast-Hitch.

2. Insert the rear gangs into the bail and rockshaft brackets and secure them with quick-attachable cotters.

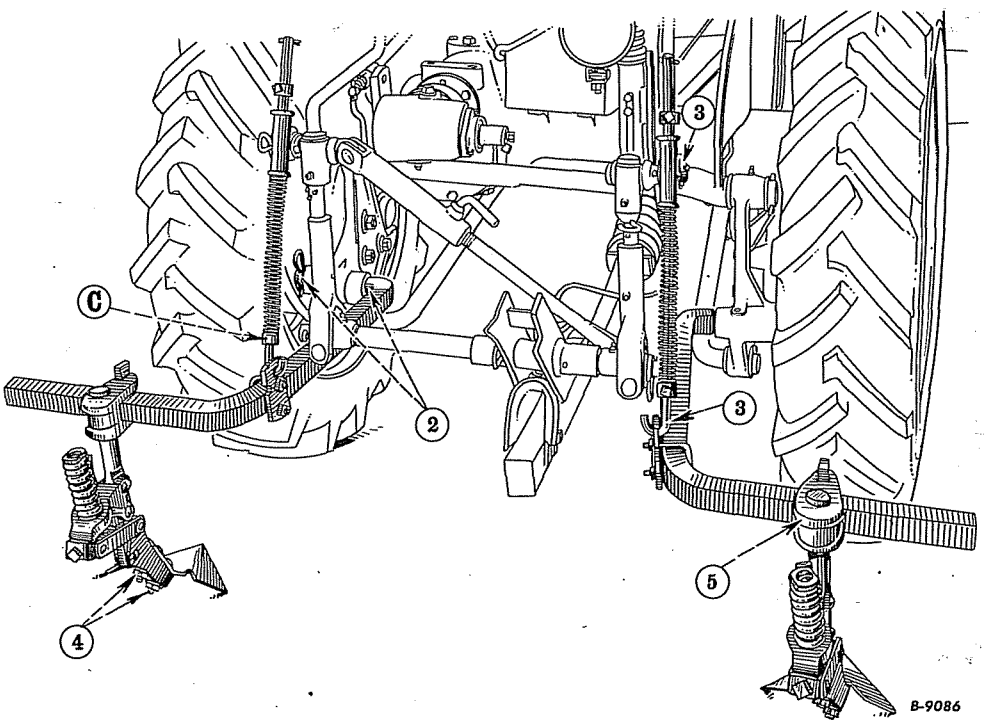
3. Hook the pressure rods to the gangs and attach the pressure rod swivels to the rockshaft.

4. Bolt the sweeps (or shovels) to the spring trips.

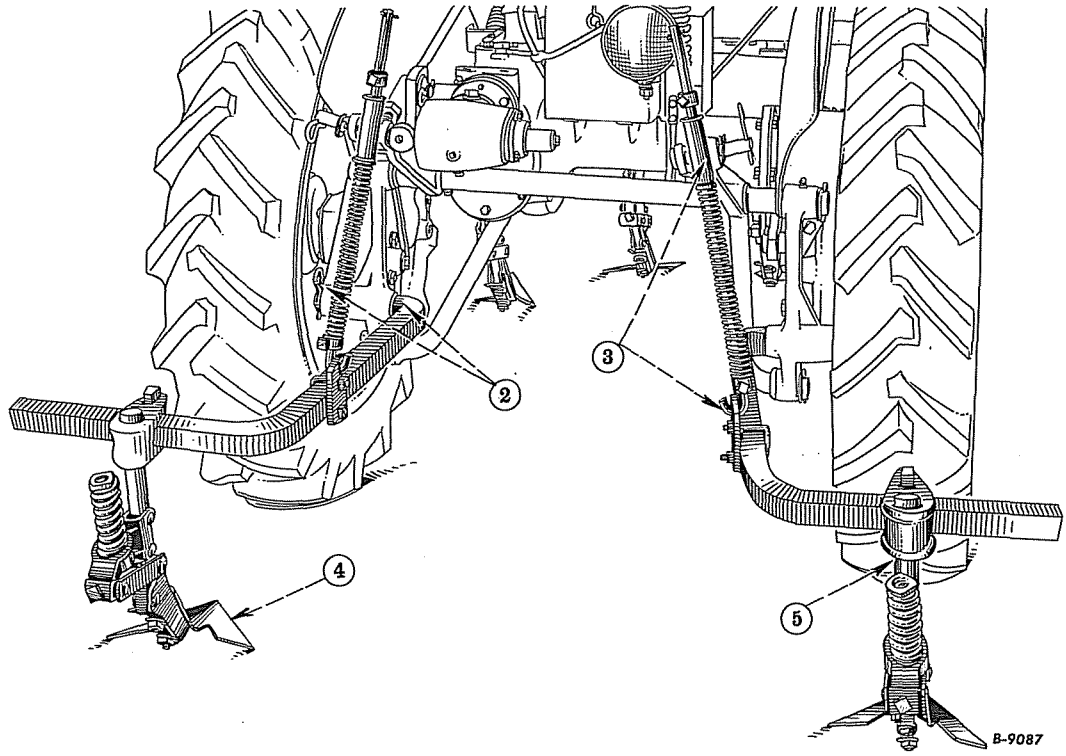
5. Clamp the spring trips to the gangs.



Illust. 18



Illust. 19
Illustration shows spring trip standards.
Friction break standards are attached in the same manner.



Illust. 20
Fast-Hitch pull bar and stabilizing links removed for clearance.
Illustration shows spring trip standards.
Friction break standards are attached in the same manner.

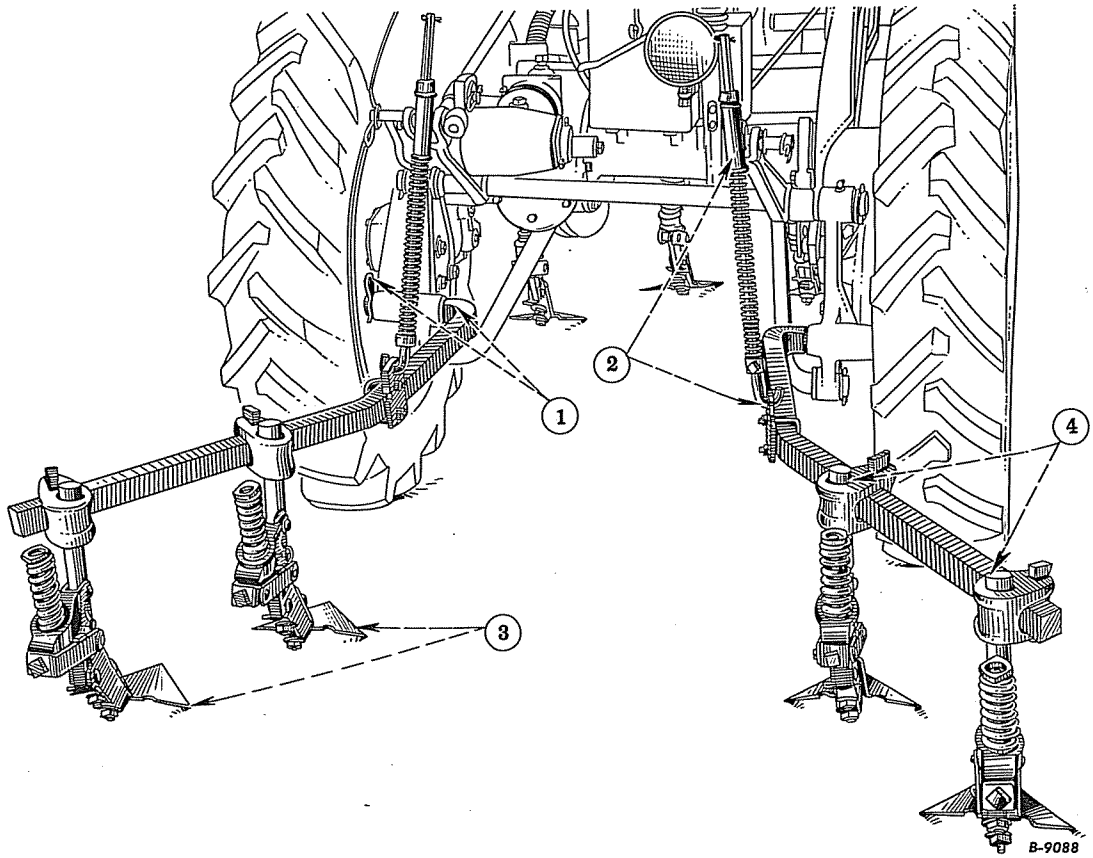
Operation

Note that to obtain pressure on the rear gangs it will be necessary to move the set collar on the Fast-Hitch lift rod back against the rockshaft swivel.

When cultivating crops with low foliage, the Fast-Hitch pull bar and stabilizing links may be left in place as shown *in Illust. 19.*

When cultivating crops with high foliage, the Fast-Hitch pull bar and stabilizing links may be removed to give clearance under the tractor as shown *in Illust. 20.*

FOUR-SWEEP REAR SECTION
(Nos. 3 and 33 Tool Equipments)



Illust. 21

Illustration shows spring trip standards.

Friction break standards are attached in the same manner.

1. Insert the rear gangs into the bail brackets and secure them with quick-attachable cotters.

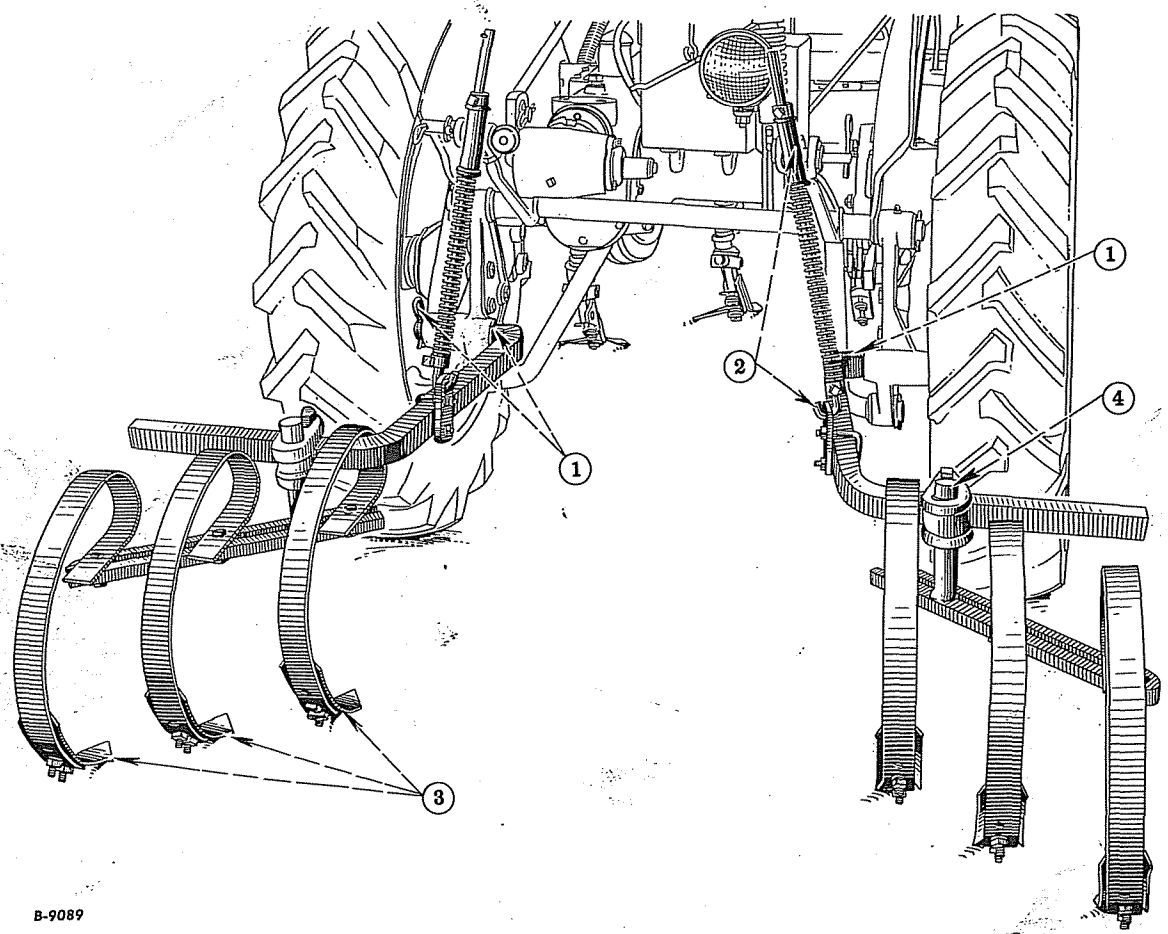
2. Hook the pressure rods to the gangs and attach the pressure rods to the rockshaft.

3. Put the sweeps on the standards.

4. Raise the gangs and attach the standards to the gangs with the wedge bolt clamps. See "WEDGE BOLT CLAMPS" in the Adjusting and Operating Instructions.

SPRING TOOTH REAR SECTION
(No. 53 Tool Equipment)

NO. 97 SPRING TOOTH ATTACHMENT
(Special)
(Nos. 1, 5, 34 and 35 Tool Equipments)



Illust. 22

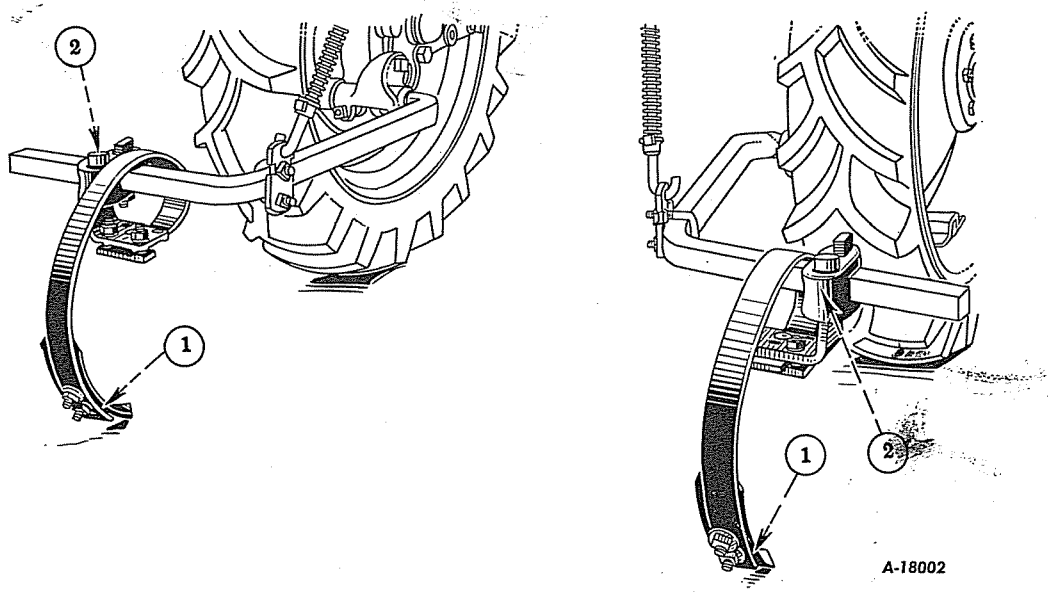
1. Insert the rear gangs into the bail brackets and secure them with quick-attachable cotters.

2. Hook the pressure rods to the gangs and attach the pressure rods to the rockshaft.

3. Put the shovels on the spring teeth.

4. Raise the gangs and attach the spring teeth with wedge bolt clamps as shown. See "WEDGE BOLT CLAMPS" in the Adjusting and Operating Instructions.

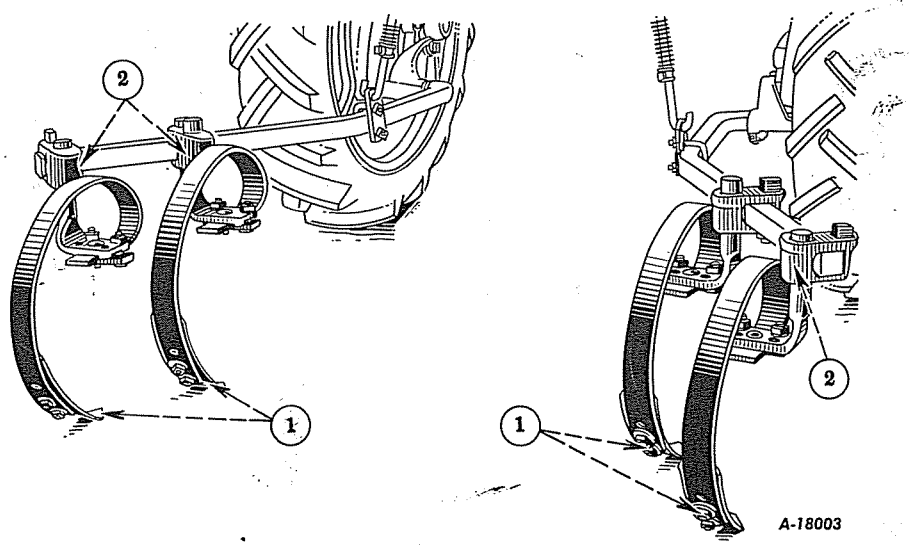
NO. 98 SPRING TOOTH ATTACHMENT (Rear Section) (Special)
(Nos. 1, 5, 34 and 35 Tool Equipments) (One Used)
(Nos. 3 and 33 Tool Equipments) (Two Used)



Illust. 23

Nos. 1, 5, 34 and 35 Tool Equipments.

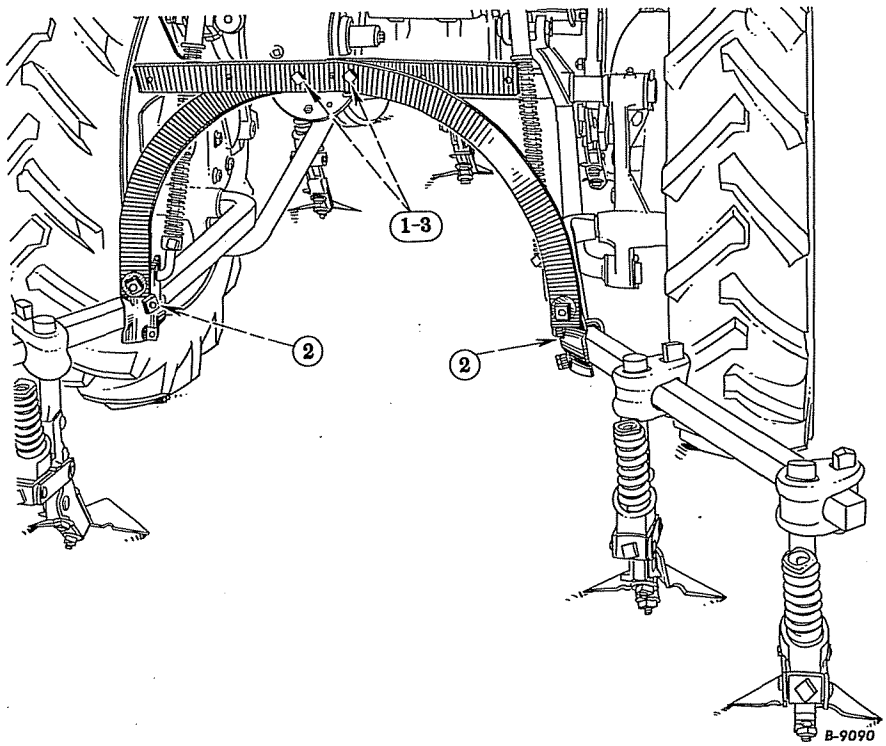
1. Bolt the shovels to the spring teeth.
2. Clamp the spring teeth to the gangs with the wedge bolt clamps. See "WEDGE BOLT CLAMPS" in the Adjusting and Operating Instructions.



Illust. 24

Nos. 3 and 33 Tool Equipments.

NO. 83 JOCKEY ARCH (Special)



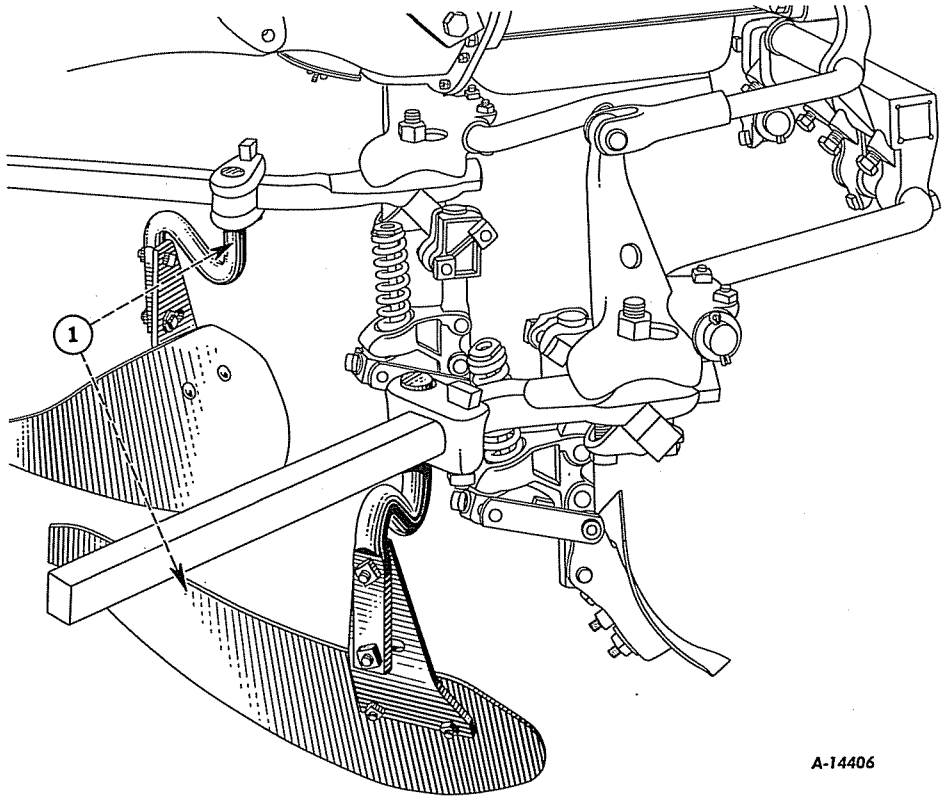
Illust. 25

Remove the pressure rod brackets from the gangs and pressure rods.

1. Remove the two bolts holding the arch together for easier installation.

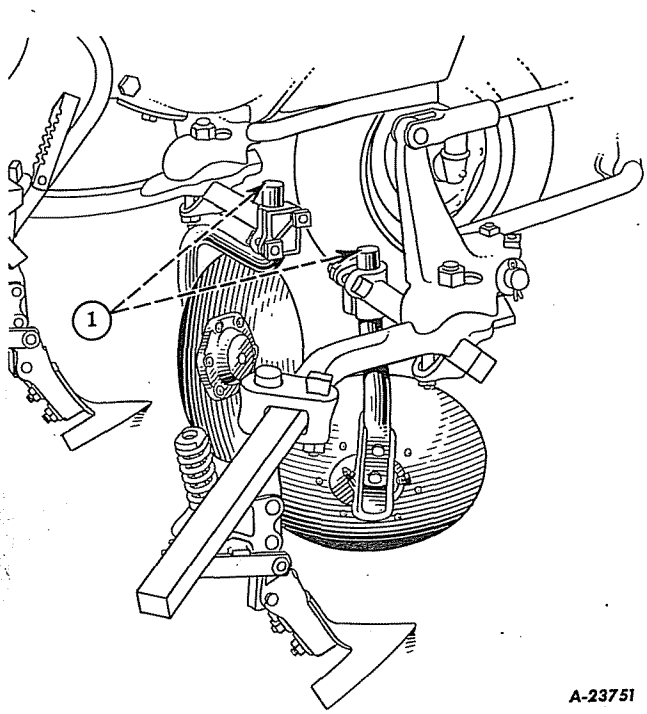
2. Hook the pressure rods into the arch brackets and attach the brackets to the corners of the gang beams as shown.

3. Bolt the arch together as shown.

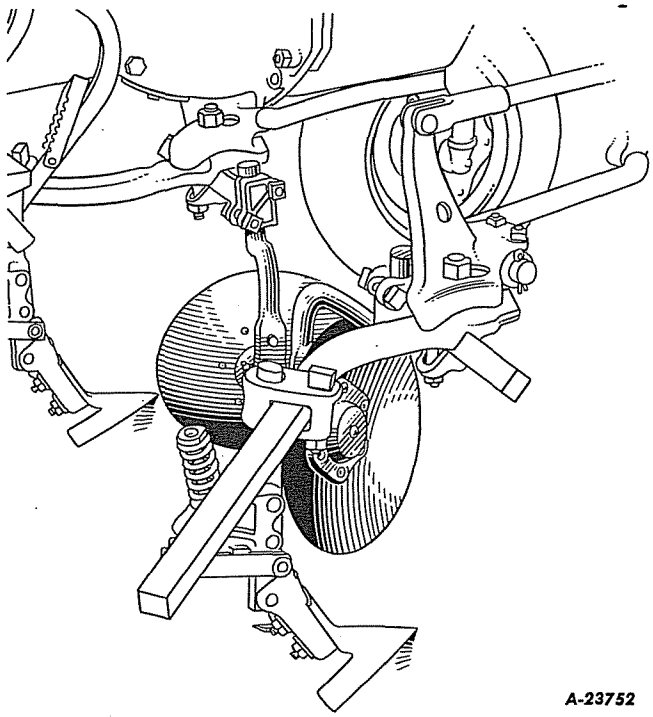


Illust. 26

1. Remove the rear standards from the wedge bolt clamps and attach the potato hiller blades.



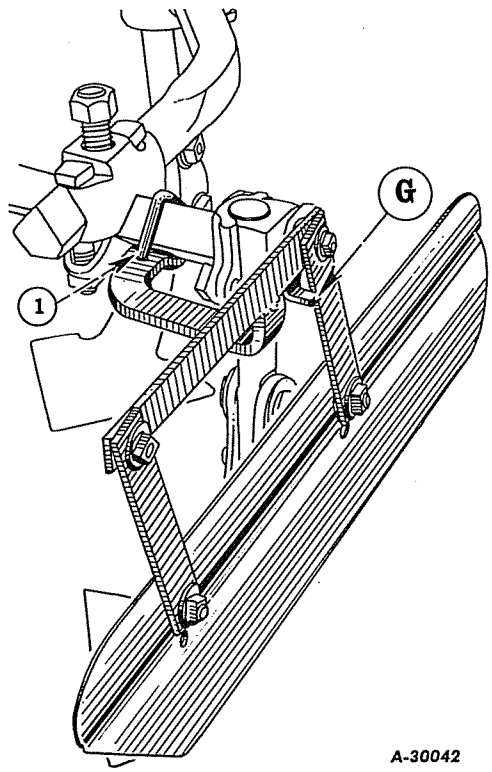
Illust. 27
Hilling up.



Illust. 28
Barring off.

1. Remove the standards (with tools) running next to the row and clamp the disk hillers in place as shown.

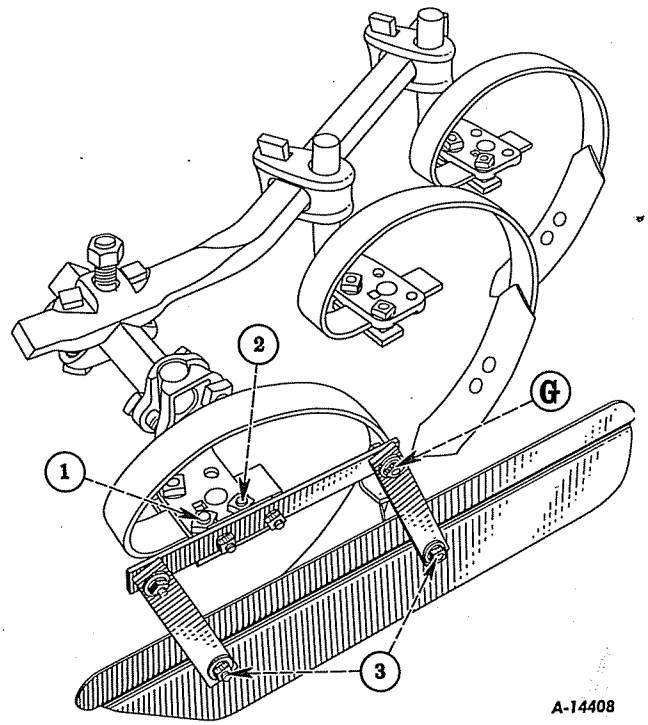
NO. 122 SHIELD (Regular)
(For Nos. 1, 3, 5, 33, 34 and 35 Tool Equipment)



Illust. 29

1. Attach the shield to the tool bar clamp as shown and adjust it in relation to the row as desired.

NO. 91 SHIELD (Special)
(For No. 53 Tool Equipment)



Illust. 30

1. Loosen the inside front bolt holding the spring tooth to the standard. Slide the shield bracket under the nut and tighten the nut securely.

2. Bolt the shield bracket to the standard, using the bolt furnished with the shield.

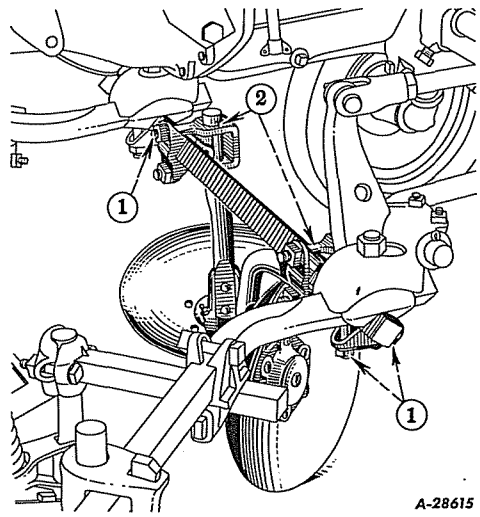
3. Bolt the pivot links in the lower holes in the shield.

BARRING-OFF DISK ATTACHMENT (Special)

Remove the standards and tool bar extensions which are used next to the row.

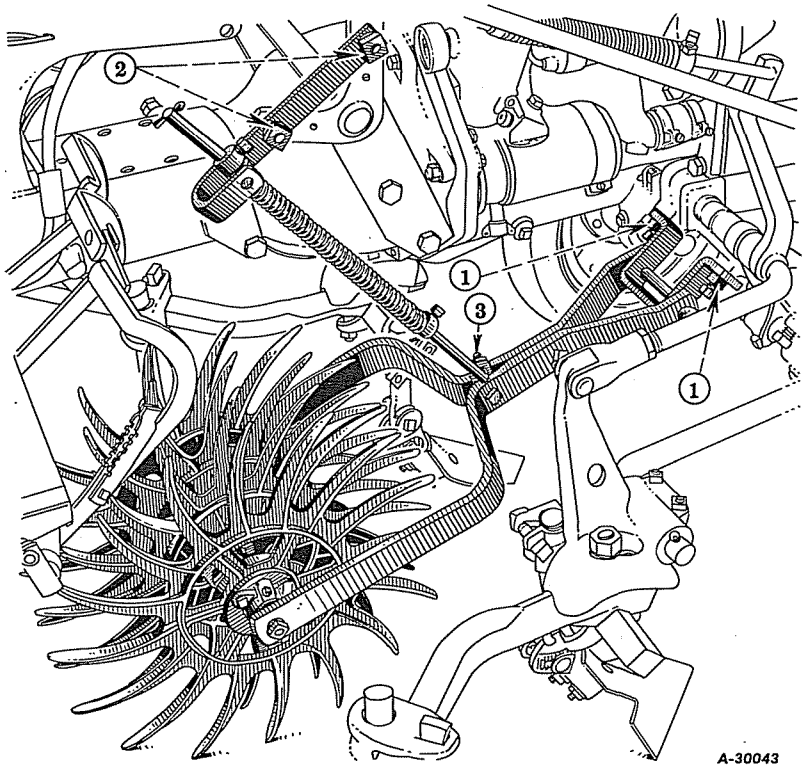
1. Slide the crossbar through the tool bar extension clamps in both gangs and tighten the clamps to hold the gangs rigidly together.

2. Clamp the disk standards to the crossbar as shown.



Illust. 31

NO. 12 ROTARY WEEDER ATTACHMENT (Special)

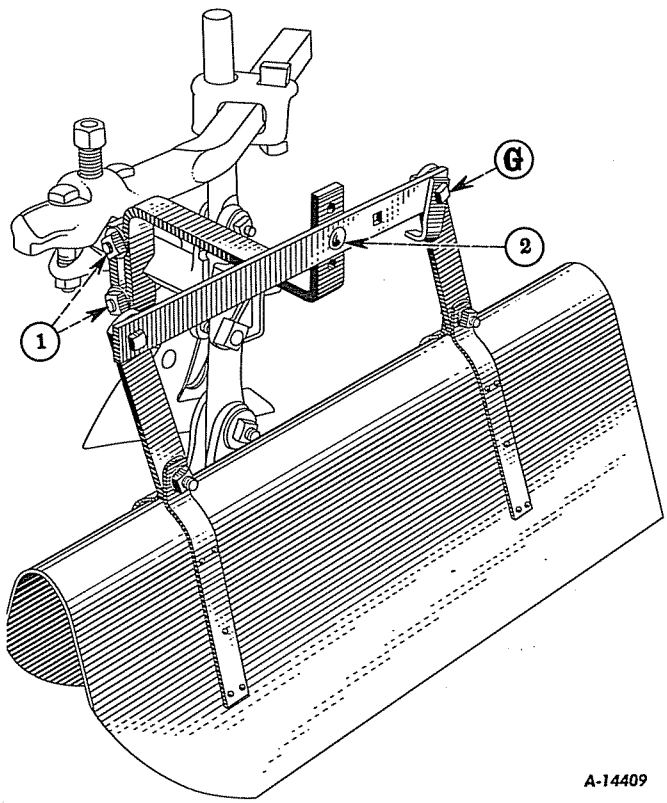


Illust. 32

1. Set the rotary hoe frame under the tractor and attach it to the steering gear housing base. Two long set screws with jam nuts are furnished; these replace the two inner screws which hold the front frame bar to the tractor. Hook the rotary hoe frame brackets over the set screws and tighten the jam nuts securely.

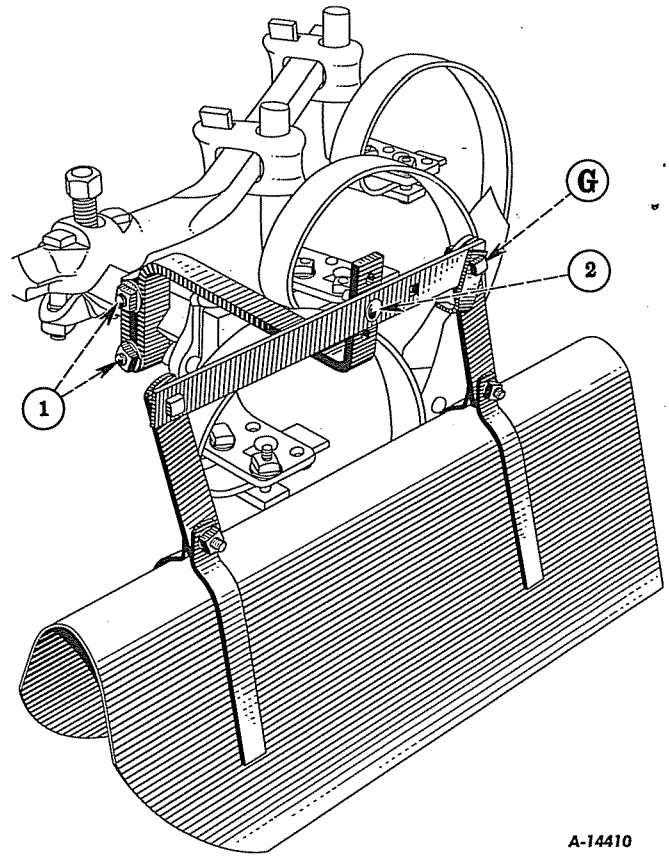
2. Bolt the pressure rod arm to the rockshaft.

3. Hook the pressure rod to the rotary hoe frame.



Illust. 33

Nos. 1, 3, 5, 33, 34 and 35 Tool Equipments.

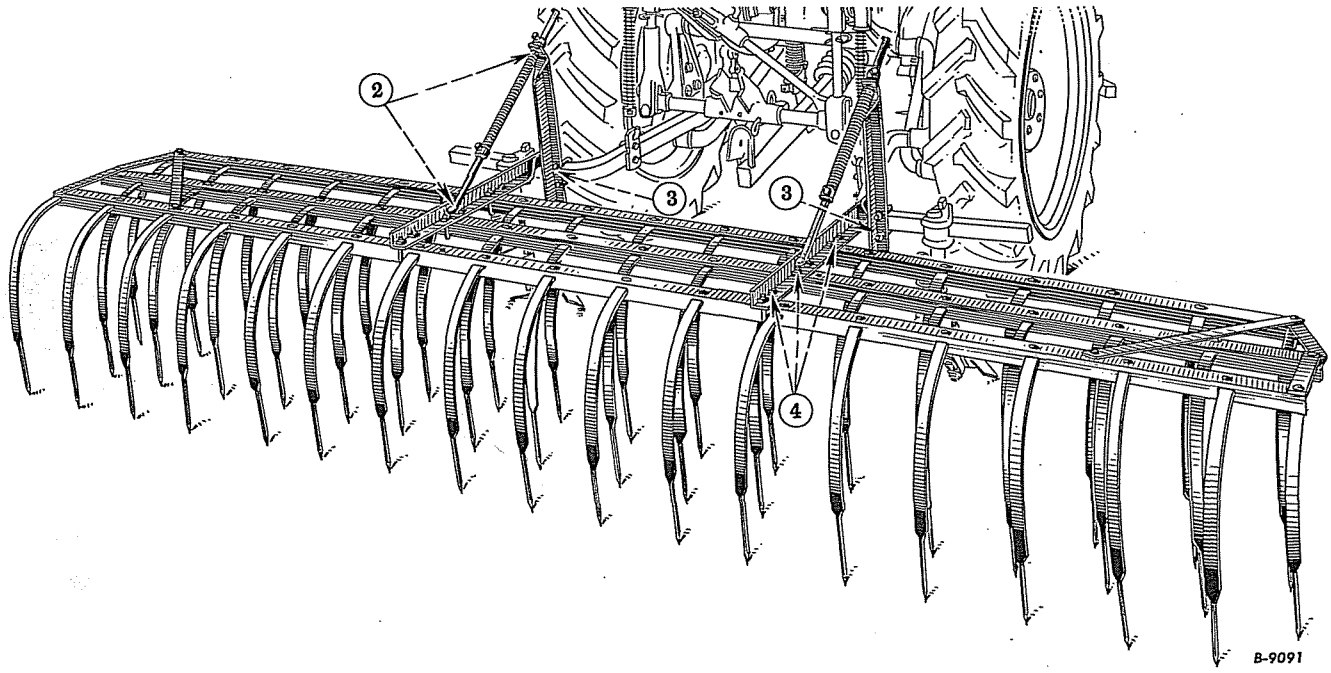


Illust. 34

No. 53 Tool Equipment.

1. Attach the shield bracket to the tool bar clamp.

2. Bolt the shield to the bracket, using the front hole in the shield support. The shield may be adjusted up or down as desired by bolting the support to the bracket in any one of the three holes in the bracket.



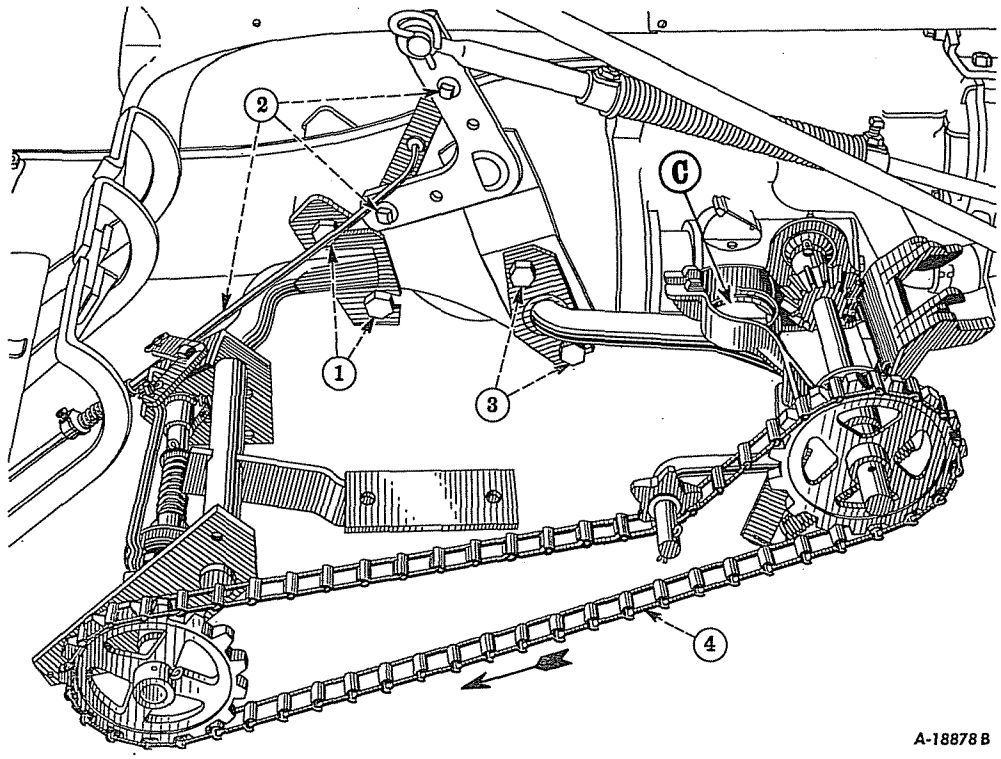
Illust. 35

1. Locate the weeder mulcher frame centrally behind the tractor.

2. Assemble the pressure rods in place as shown.

3. Clamp the hitch assembly to the outside gang beams.

4. Assemble the hitch to the weeder mulcher frame with the U-bolts.



Illust. 36

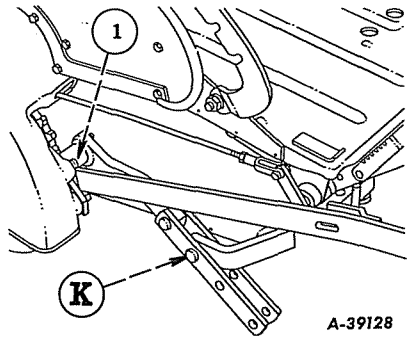
Note that the fertilizer feed shaft driven sprocket is set inward and pinned to the second hole in the shaft to line up with the countershaft drive sprocket.

1. Attach the countershaft frame to the rear mounting pad on the right side of the tractor, using the two conical head attaching screws.

2. Bolt the throw-out rod adapter to the rockshaft arms and connect the throw-out rod as shown.

3. Attach the hopper support to the front mounting pad on the side of the tractor as shown.

4. Put on the drive chain. See "CHAINS" in the Adjusting and Operating Instructions.



Illust. 37

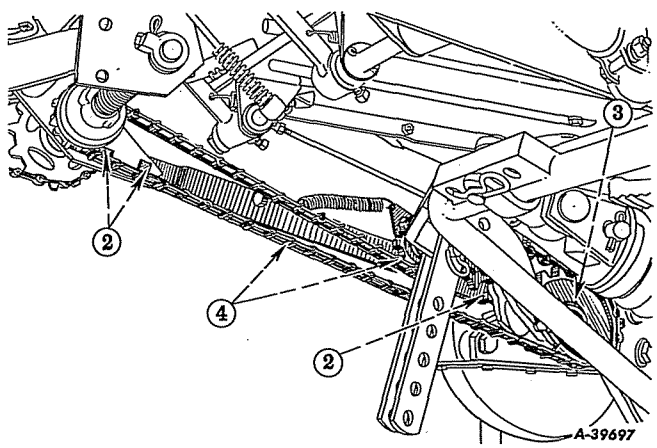
1. Remove the spring bolt from the hitch adjusting lever and push the lever forward as far as possible. Turn the headless screw into the housing until the lever can be raised without striking the stud. This stud is supplied with the countershaft for use with tractors equipped with Fast-Hitch. A 3/4" hex-hd. cap screw is also supplied for use with tractors not equipped with Fast-Hitch.

2. Hook the countershaft brace over the headless stud and then bolt it to the countershaft. Raise the hitch adjusting lever up to the normal position and replace the spring bolt previously removed.

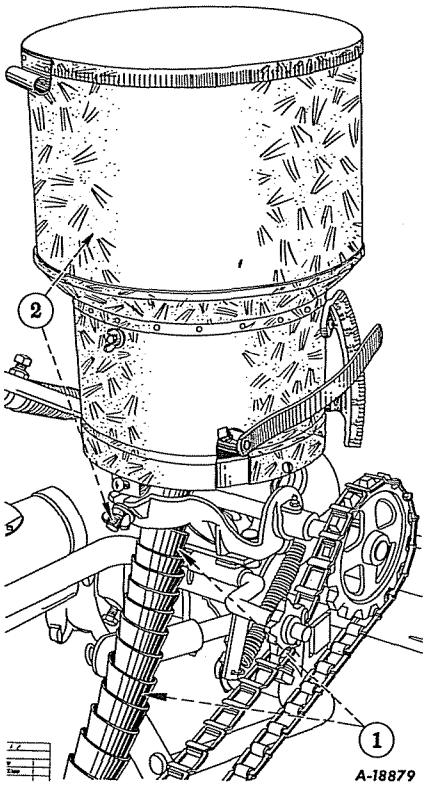
Note that the Fast-Hitch bail must be raised up, pinned up to the top hole in the hitch links *(see "K," Illust. 37)*, and the hitch lever raised as high as possible to clear the planter ground unit.

3. Attach the seed plate drive sprocket to the tractor drive spindle with the machine bolt furnished.

4. Put on the main drive chains. Also see **"CHAINS" in the Adjusting and Operating Instructions.**



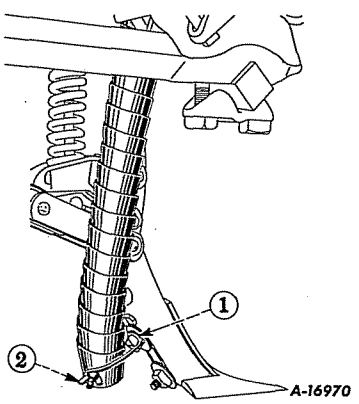
Illust. 38



Illust. 39

1. Run the delivery tube down through the opening "C" *(Illust. 36)* in the hopper bracket so the tube is supported by the flange at the end.

2. Set the hopper on the support and secure it in place with the wing nut.



Illust. 40

1. Attach the tube connection wire to the sweep bolt.

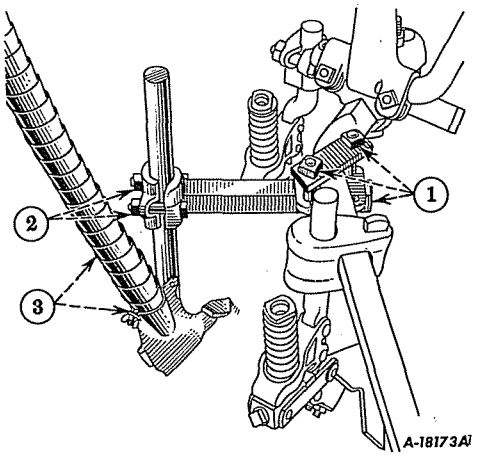
2. Attach the lower end of the tube to the wire and tighten the wing nut.

DEEP APPLICATOR ATTACHMENT (Special)
(For use with Cub-101A Fertilizer Unit for Side Dressing with Cultivator)

1. Clamp the tool bar extension to the outside tool bar. Leave the nuts loose.

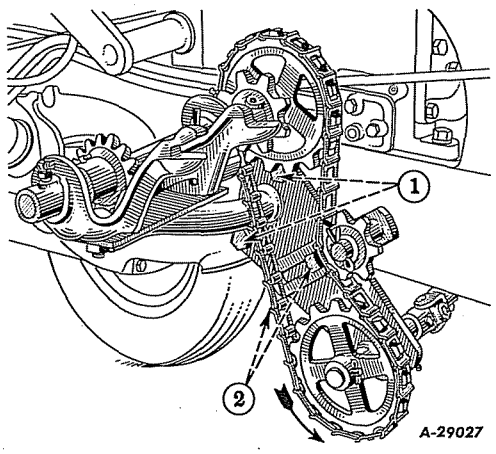
2. Clamp the deep applicator shank to the tool bar extension. Adjust the shank and the tool bar extension to place the fertilizer in relation to the row as desired. Tighten all nuts securely to hold the adjustment.

3. Connect the fertilizer tube and tighten the wing nut.

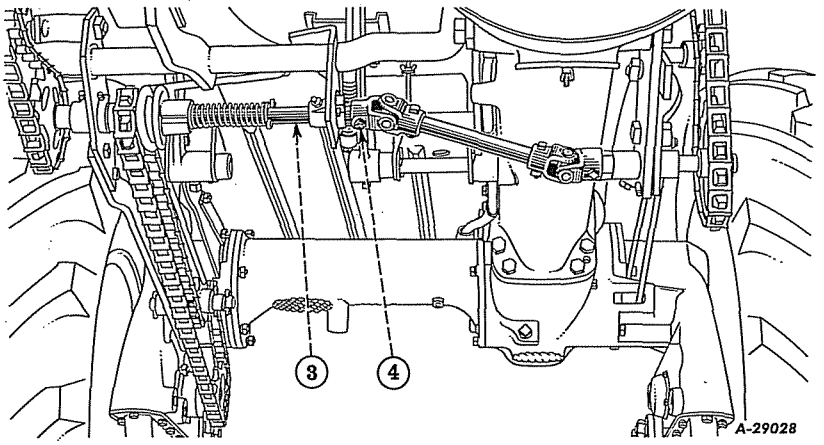


Illust. 41

EXTRA HOPPER ATTACHMENT (Special)
(For use with Cub-101A Fertilizer Unit)



Illust. 42



Illust. 43

1. Attach the hopper support to the tractor, using hex-hd. screws.

2. Put on the drive chain and set the chain tightener as shown.

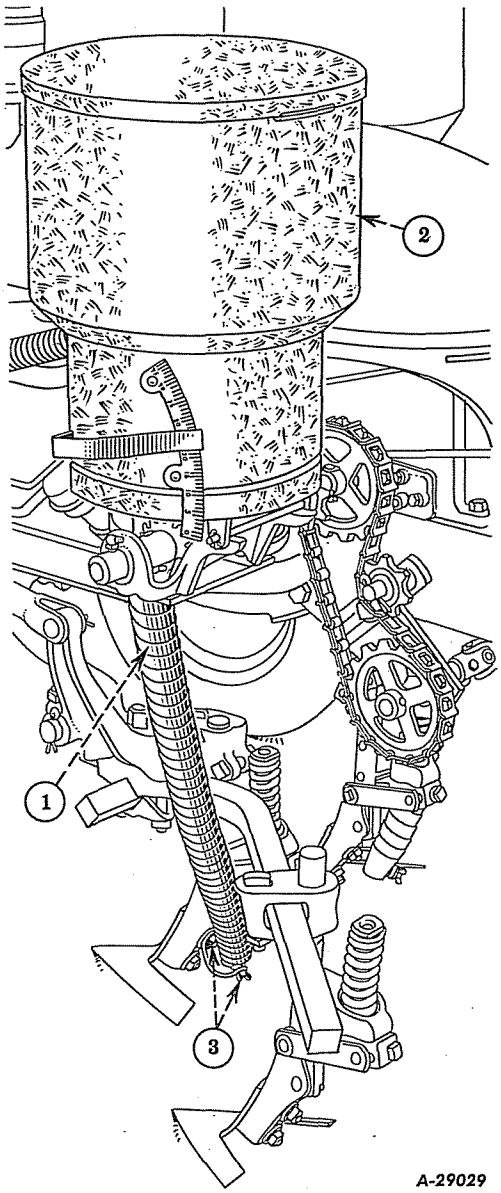
3. Replace the countershaft with the longer one furnished.

4. Attach the universal joint to the countershaft.

1. Run the fertilizer delivery tube down through the opening in the hopper bracket so the tube is supported by the flange at the end of the tube.

2. Set the fertilizer hopper on the bracket and secure it with the wing nut.

3. Bolt the tube connection to the sweep running next to the row and connect the tube.



Illust. 44

Accidents can be prevented with your help

No accident-prevention program can be successful without the wholehearted co-operation of the person who is directly responsible for the operation of equipment.

To read accident reports from all over the country is to be convinced that a large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it. No power-driven equipment, whether it be transportation or processing, whether it be on the highway, in the harvest field or in the industrial plant, can be safer than the man who is at the controls. If accidents are to be prevented—and they can be prevented—it will be done by the operators who accept a full measure of their responsibility.

It is true that the designer, the manufacturer, the safety engineer can help; and they will help, but their combined efforts can be wiped out by a single careless act of the operator.

It is said that *"the best kind of a safety device is a careful operator."* We ask you to be that kind of an operator.

NATIONAL SAFETY COUNCIL

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When selecting new farm operating equipment, keep in mind the protective service facilities provided by the International Harvester dealer in your community.

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